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June 1961

JOINT PHOTOGRAPHIC INTELLIGENCE REPORT

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MINING COMPLEX
AKSUYEK, USSR



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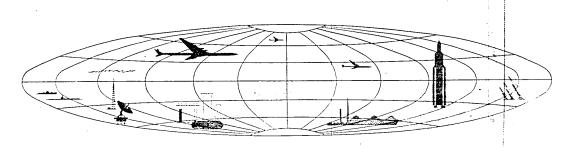


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JOINT PHOTOGRAPHIC INTELLIGENCE REPORT

# MINING COMPLEX AKSUYEK, USSR

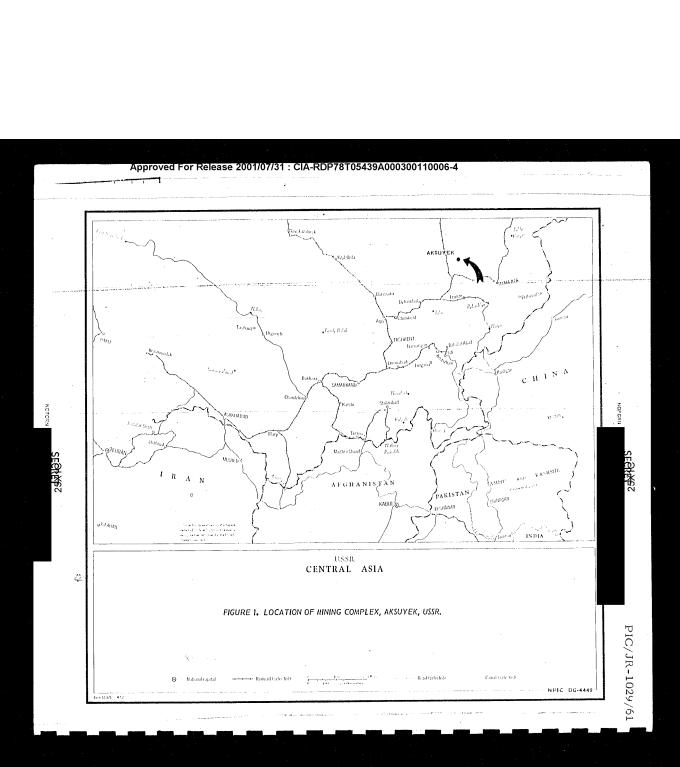
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# 25X1D OVERALL CHARACTERISTICS

Photography reveals a new mining complex under construction in an isolated desert location (44-38N 74-31E)\* approximately 155 nautical miles (nm) south of Balkhash and 105 nm north of Frunze (see Figure 1). It is situated in the lower foothills of the Chu-Iliyshiye mountain range overlooking the dry steppe and desert country around the southern tip of Lake Balkhash. A new, well-engineered, all-weather highway connects the area with a railhead on the Mointy-Chu Railroad approximately 29 nm to the northwest (see Figures 2 and 3).

The complex is characterized by an unusual amount of security around widely dispersed units. The early stage of construction of most of the complex precludes a definite determination of the exact function of some of the facilities. However, the general lack of adequate quantities of electric power and processing water would, at least, minimize the feasibility of this new complex being used for extensive ore-processing operations.

The quantity of the housing presently under construction in the complex, along with the possibilities for further expansion (No 3, 5, and 27), appear to be far in excess of that required for the present size of the mining operation. Also, the particular architectural style of this housing (mostly two- and four-family houses with a minimum of barracks-type housing) would be more in keeping with the usual style of housing supplied scientific/technical personnel with families than that normally provided miners. The amount of security around the areas still in the early stages of construction appears to be excessive, indicating slave labor construction crews were probably being used at this time. A probable forced labor camp appears in use within the complex.

The degree of dispersal of the service and processing units (No 12 through 25) suggests the possibility that the major units are either not

<sup>\*</sup> Only the referenced SAC chart carries the name Aksuyek for this desert town. The chart compiler subsequently reported the name was erroneously placed on the chart and that no official name is yet known for this town.

closely associated with each other, or that the particular type of activity engaged in the major units requires adequate dispersal for security or safety.

The type of mining being done at the mining complex cannot be determined from the photography. Most of the present activity appears to be exploratory and preliminary development operations. Actual mining has progressed to the point where one small headframe and one large openpit mine are in operation. Lack of bulk-handling facilities, and the absence of heavily-traveled roads leading from these operations support the premise that the operations are primarily for developmental purposes rather than for producing ores which are to be moved from the area. Processing facilities such as ball mills, thickeners, waste disposal, etc., are still lacking at this complex.

The presence of two large areas of shrub vegetation resulting from probable leaching of certain minerals from scattered piles of mine waste, as well as two groups of ruins which may have been former mining camps suggest the possibility that an abandoned mining complex is now being redeveloped for a mineral which has assumed new importance.

A limited supply of water is obtained by pipeline from a probable river source in the mountains at least 20 miles south of Aksuyek (actual source is cloud covered on the photography). A small quantity of electrical power is probably developed locally since no high-tension power lines can be detected entering the complex area.

#### DETAILED DESCRIPTION

The following list describes the individual facilities at the complex. The numbers of the items refer to Figure 3. All dimensions are in feet.

#### 1. Housing area.

Five barracks in various stages of construction, 145 x 35, single

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FIGURE 2. MINING COMPLEX, AKSUYEK, USSR. (Photography

- 5 -

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story, unroofed at present; five family dwellings, 30 by 20, single story, hipped roof; five support and storage buildings, single story, total roof area, 7,500 square feet.

2. Probable storage area.

Four storage-type buildings, single story, total roof area, 6,100 square feet.

3. Unidentified secured area.

A cleared area,  $615 \times 475$ , is enclosed by a double security fence and guarded by four guard towers.

- a. Main gate and guardhouse.
- b. Rectangular excavation, approximately 25 x 10.
- c. Vertical cylindrical tank, possibly semiburied, approximately 20 diameter and 25 high.
- d. Unidentified building, 30 x 30, single story, flat roof, with wing,  $60 \times 20$ , single story, gable roof. Near northeast corner of the gable roofed building is possibly a small stack, approximately 25 high. Immediately to the west is a small unidentified building,  $35 \times 20$ , single story, hipped roof.
- e. Faint images of five possible excavated foundations for buildings, approximately 65  $\times$  20 each. No construction materials or machinery could be detected in the area.
- f. Small unidentified building or tower, 15 x 15 and approximately 65 high.
- 4. Circular excavation approximately 30 inside diameter.
- 5. Housing area.

Area is in early stage of construction, and secured by a probable

- 6 -

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double fence with nine guard towers and one main gatehouse. The overall area enclosed by the double fence is approximately 30 acres.

- a. Probable excavation and foundation for two buildings, approximately  $95 \times 35$  and  $95 \times 30$ .
- b. Probable heat and power plant, 80 x 35, multistory, probably hipped roof. Excavations are being made for pipelines from this building to other buildings in complex.
- c. Foundations for probable multifamily houses arranged in parallel rows with excavations for probable utility buildings between the rows. A total of at least 23 houses and 8 utility buildings will be constructed in these 2 blocks. These houses will probably be 4-family houses similar to those in block "a" in area 27.
- d. Blocks of multifamily houses in various stages of construction, with excavations for probable utility buildings between the parallel rows of houses. At least 22 houses and probably 8 utility buildings will be constructed in these 2 blocks. The houses in these 2 blocks appear to be 2-family executive-type dwellings similar to those found in block "g" in area 27.
- e. Double-wing building under construction, foundation covers approximately 7,300 square feet.
- f. Deep excavation for building under construction, approximately  $80 \times 35$ . Immediately south is an unidentified building,  $65 \times 35$ , single story, flat roof with possible longitudinal monitor.
- 6. Probable service or utility building under construction, 75 x 25.
- 7. Storage-type building, 70 x 40, single story, gable roof.
- 8. Foundation for building under construction,  $125 \times 40$ .

9. Two four-family houses with associated utility building similar to those on south side of main road. Immediately to the north of the utility

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building are faint images of three possible foundations for buildings to be constructed.

- 10. Administrative-type building under construction, two-winged, 130 x 55 with wings, 45 x 30, multistory, probable flat roof.
- 11. Housing area.

Four barracks, 130 x 35, single story, gable roof. Four support buildings, 20 x 15, 40 x 20, 100 x 20, 60 x 20, all single story, gable roof.

12. Motor pool and vehicle repair shops.

This rectangular area, approximately 635 x 540, is enclosed by a solid fence, except for a portion around the southeast corner where a wire fence is used.

- a. U-shaped repair facility, 190 x 40 with two wings, each 65 x 35, single story, gable roof.
  - b. Secured vehicle park.
- c. Main gate and administration building, 45 x 35, single story, gable roof.
  - d. Two repair shops, 50 x 30, single story, gable roof.
- e. Very faint images of four or five probable masts, approximately 55 tall.
- f. Unidentified fenced area. Only two sides of area are fenced. Inside is an unidentified slender object approximately  $50 \times 10$ .
- 13. Unidentified triangular secured area.

A considerable amount of vehicular trackage is found in the area, but the small amount of unidentified ground clutter does not provide any clues to the purpose of this secured area.

# 14. Probable storage area.

The area, 440 x 365, is enclosed by wire fence, with no guard towers apparent, but with one gatehouse at the main entrance.

- a. Storage building,  $95 \times 50$ , single story, gable roof. A short distance to the east is a possible vertical tank, approximately 10-feet diameter and 10-feet high.
- b. Three probable storage buildings,  $55 \times 35$ ,  $55 \times 35$ , and  $40 \times 35$ , all single story. The two larger buildings have hipped roofs with a monitorlike structure running the length of the roof and extending over the northern end of building forming a wing approximately  $15 \times 10$ . Faint images on center of roof suggests possibly two or more small stacks or ventilators. These two buildings are surrounded by revetments which cover the walls to approximately the roof eaves. Entrance through the revetment is gained through the probable loading wing on the northern end of each building. The smaller middle building also possibly has a small stack or ventilator on its roof. This building is not revetted, but does appear to have a tall possible tower or stack on its eastern side. Two possible conveyors or ramplike structures are at the extreme northeastern corner of the building.

#### 15. Unidentified processing area under construction.

This trapezium-shaped area, in the late stages of construction, embraces an area of approximately 16 acres enclosed by a double wire fence. Five guard towers and a gatehouse add to the security measures of the area. Extensive pipeline excavations connect this area with the two major housing areas. The only apparent access to the area by road is by the main road which connects it to these major housing areas. When construction of the area is complete, access may possibly be made to the main highway which leads to the western Lake Balkhash area. At present, however, both fences appear to cross the highway unbroken.

- a. Processing building, multistory, flat roof,  $80 \times 40$ , with two wings  $40 \times 20$  each. Unidentified T-shaped structure is located in the courtyard of building, with a height approximately the same as the building.
  - b. Possible spherical tank approximately 10 in diameter.
  - c. Unidentified building, 120 x 45, multistory, hipped roof.
- d. Processing building, multistory, hipped roof. An inclined conveyor is on the east side of building.
- e. Processing building, multistory, flat roof with four ventilators in line, irregular shape, total roof area approximately, 6,500 square feet. Ground clutter around the south and western sides of the building suggests the presence of some possible chemical equipment. Attached to the southern side of the building is a possible vertical tank approximately 10 in diameter and possibly as high as the building itself. A possible horizontal tank, is near the southeast corner of the building. A possible column, approximately 5 in diameter and at least as tall as the building is at the southwest corner of the building. Adjacent to the column is a possible semiburied tank approximately 20 in diameter. The western end of the building has an unusual protuberance through its roof causing the roof to appear as though it had been fitted around a cylinder underneath having dimensions of approximately 20 x 15. Near the northern edge of building is a vertical tank approximately 10 in diameter.
- f. Unidentified building, irregular shape, total roof area approximately 850 square feet. Extending from the northern side of this building are three linear tanklike ponds, approximately 35 x 10. The ponds are rounded on one end and appear to be filled with a dark nonreflective liquid. A possible vertical tank approximately diameter is located along the southern edge of building.
- g. Bulbous-shaped excavation, the function of which cannot be determined at this stage of construction.
- h. Possible semiburied building under construction, 60 x 45. At eastern end of building is a deep excavation, approximately 55 x 45.
  - i. Probable excavation for building under construction, approxim-

- 10 -

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ately 35  $\times$  35. This site is situated along the bottom slope of a small hill on top of which is a small possible pumphouse with pipelines coming to it from the southwest and southeast.

- j. Possible covered conveyor, approximately 195 x 15.
- k. Processing building,  $155 \times 30$ , multistory, flat roof. The northern quarter of the building is uncovered and an unidentified tanklike object is faintly visible on the top floor. Other indistinct objects are also nearby. A conveyor leads from near the southwest corner of this uncovered section to a possible mound on the ground. Along the eastern edge of the building are two small columnlike objects possibly about one half as high as the building.
- l. Possible machine shop,  $80 \times 50$ , multistory deck roof with probable longitudinal monitor.

# 16. Unidentified secured area.

This trapezoidal-shaped area of approximately 3.5 acres is enclosed by a double wire fence and guarded by four guard towers. Most of the buildings within the area are situated on or near the top of a small rounded knoll. Lack of roads or well-defined tracks would indicate little or no vehicular traffic within the area.

- a. Unidentified building,  $55 \times 35$ , multistory, gable roof, the eastern end has a steplike roof structure over the entrance. A single story, gable roof wing, approximately  $40 \times 35$ , is attached to the southwest corner of the multistory building.
- b. Unidentified building, single story, probably flat roof, irregular shape with total roof area of approximately 1,900 square feet. To the east of this building is a possible elevated pipeline leading from a small possible pumphouse to an indistinct image resembling an irregular mound of earth. Two small streams of liquid drain down the slope from the vicinity of the possible pumphouse and an adjacent small building. Two small semiburied vertical tanks, approximately 10 in diameter, are located nearby.

17. Open storage area secured by a single wire fence.

There are three small buildings, and one large warehouse,  $155 \times 35$ , in the area. In addition to a small probable coal pile in the southwestern corner of the area, there are numerous unidentified small objects scattered around the perimeter of the area.

- 18. Warehouse, 145 x 35, single story, gable roof, secured with single wire fence.
- 19. Unidentified processing building, 145 x 50, single story, possible gable roof with box monitors.

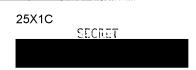
Indistinct imagery along northern side of building suggests one or more towers or scaffolding. Possible stacks or ventilators are located at the northeast and southeast corners of the building. A ramplike structure may extend from near the top of the southeast stack to the bottom of a deep excavation at the east end of the building. Additional indistinct images around the building suggest it may still be under construction. No security measures can be detected.

20. Probable shop building, 45 x 35, single story, gable roof.

Indistinct linear images in vicinity suggest possible construction materials.

- 21. Probable shop building, 35 x 20, single story, gable roof, with probable small stack.
- 22. Unidentified building, 70 x 30, single story, gable roof.

Indistinct roof clutter suggests several small ventilators. There is also a possible tank supported on the roof by framework near the western



end of building. A possible small stack is at eastern end of building. Near the southern side of building is a possible small, semiburied building, approximately  $20 \times 10$  with a small stack at its southern end.

# 23. Possible forge.

Main section, 40 x 30, multistory, probable flat roof with possible tall stack; southern section, 25 x 20, single story, gable roof; western section, 40 x 15, single story, shed roof. Immediately to west of building is considerable amount of indistinct ground clutter suggestive of piles of earthen material. Among this clutter is a possible small building under construction with a small crane which has moved between exposures.

#### 24. Four probable storage buildings.

All single story, total roof area approximately 8,800 square feet. To the east and south of these buildings is an extensive area of open storage in which irregularly scattered piles of unidentified materials are stored.

#### 25. Possible chemical processing area.

This rectangular area of approximately three acres is enclosed by at least a single wire fence, and possibly by a double wire fence. The typical guard towers used with double fences are not present, although faint images at the corners suggest possible open, frame-type guard towers. While the function of this area has not been identified, there is an indication of a possible chemical-processing function as suggested by the indistinct images around the main buildings which could possibly be small tanks, reaction towers, etc. Also, in the center of the area are two rectangular basins, the larger of which appears to be filled with a dark non-reflective liquid. The two basins are interconnected by pipeline. In addition, other pipelines lead into the larger basin from an adjacent pumphouse and other smaller unidentified objects nearby. The larger main buildings of the area do not appear to be connected by pipeline to these basins.

a. Unidentified processing building, 45 x 20 single story, probable

flat root, with at least two ventilators or small stacks. A vertical tank approximately 10 in diameter is located at northwest corner of building. Along the eastern side of the building are possibly two similar tanks and possibly two or more smaller tanks.

- b. Two rectangular basins,  $50 \times 30$  and  $50 \times 20$ . Near eastern side of larger basin is a small  $20 \times 15$  building with a small stack and possible coal pile, suggesting a probable boilerhouse. However, no pipelines could be detected leading from this building.
- c. Possible processing building, 45 x 35, single story, gable roof. Along the western edge of building are three possible tanks or towers, less than 5 in diameter and less than the height of the building. They are approximately equally spaced. Near the southern end of building is a probable tower connected to the building by large pipeline or conveyor. While the shadow of the tower is not distinct enough to obtain measurement, the tower appears to be slightly higher than the building. A small stack with possible dust marks around it is located at the extreme northwestern corner of the building.
- d. Unidentified building, 80 x 30, single story, gable roof with three large probable ventilators along the western side of building.
- 26. Unidentified circular object, approximately 65 in diameter, appears to be simply a low circular mound of earth. No vehicular tracks lead to it and the earth and vegetation in and around the circle appear to be undisturbed.

#### 27. Housing area.

This unsecured housing area covers an area of approximately 28 acres. Construction activity in the area appears to be approximately 90 percent completed.

a. Block of multifamily houses arranged in two parallel rows with utility houses between the rows. Ten four-family houses and four utility buildings are in this block. One of the houses at the southern end of this

- 14 -

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block is slightly larger than the other houses. Directly west of this house is a possible service building,  $65 \times 40$ , under construction. At the northern end of this block is a probable community house,  $80 \times 50$ , multistory, gable roof, with a small stack at its southwestern corner. At the northeastern corner of this building is a probable water storage tank and another small stack.

- b. Probable warehouse,  $140 \times 40$ , single story, gable roof. This building and several small buildings are secured within a solid fence which encloses an area of approximately  $270 \times 270$ .
- c. Block of multifamily houses. Foundations for 5, 4-family houses and 3 utility buildings are visible in this block. One house has been completed and four are nearing completion at southern end of block.
- d. Probable executive's residence,  $55 \times 45$ , multistory, hipped roof. Enclosed within solid fence with small service building and probable small coal pile.
- e. Block of multifamily houses arranged in parallel rows with utility houses between the rows. Fourteen four-family houses and five utility houses are in this block. Two of these houses at the southern end of block (one is still under construction) are slightly larger than the remaining houses.
- f. Probable executive's residence,  $60 \times 30$ , with two covered entrances,  $15 \times 10$ , single story, gable roof, enclosed by solid fence.
- g. Block of multifamily houses in parallel rows with utility houses between the rows. There are 15 2-family houses (similar in size and shape to the executive's house at "f"), 8 utility buildings completed and probably 5 additional utility buildings under construction. At the northern end of this block are two, four-family houses similar to those at "e".

# 28. Probable forced labor camp.

This rectangular area of approximately 13 acres is enclosed by a wire fence inside a solid fence and guarded by four guard towers. Attached

to the eastern side of this area is the camp headquarters area of approximately 1.2 acres enclosed by a solid fence.

- a. Eight support and storage buildings, single story, gable roof, total roof area, 14,500 square feet.
- b. Storage building,  $145 \times 40$ , single story, gable roof, secured by solid fence.
- c. Buried tank, approximately 20 diameter. Possible small pump-house is adjacent to tank.
- d. Three barracks, 145 x 40, and one probable barracks/dining hall, 195 x 40 all single story, gable roof. These buildings appear to be in the final stages of construction. To the west of this group are two probable storage buildings,  $45 \times 30$ , single story, gable roof.
- e. Camp headquarters contains one barrackslike building,  $145 \times 40$ , single story, gable roof, and three probable storage and repair buildings,  $30 \times 30$ ,  $55 \times 15$ , and  $60 \times 35$ , all single story, gable roof.
- 29. Probable auxiliary diesel power plant, 65 x 30, single story, gable roof, enclosed within a solid fence with one guard tower.
- 30. Possible explosive storage area, enclosed by probable wire fence. One main storage building, 45 x 20, single story, gable roof with small covered loading platform, and two very small shed-type buildings are surrounded by a cleared fire break. One additional small shed is outside the fire break.
- 31. Unidentified secured area, enclosed by single wire fence with three guard towers and a gatehouse. The large amount of track activity and scattered mounds of earth within and around the enclosure probably signify an early stage of construction. Only a few small sheds existed at the time of photography. One large mound of earth within the enclosure has certain linear aspects which suggests a possible earth-covered structure. A pipeline enters the enclosure from the northeast.

# 32. Housing area.

- a. Two multifamily houses, 65 x 20, 65 x 30, single story, gable roof.
- b. Irregular shaped multifamily house, single story, gable roof, total roof area approximately 3,200 square feet. A small fenced yard is in rear of this building. Across the road to the east is a small storage building,  $65 \times 20$ , single story, gable roof.
- c. Two barracks buildings,  $140 \times 45$ , single story, gable roof, and one possible storage building,  $100 \times 20$ , single story, gable roof with two covered entrances.

# 33. Former mud village.

One probable storage building appears new,  $95 \times 20$ , single story, gable roof. Approximately 100 buildings have been abandoned. The roofs and walls of most of these buildings have crumbled.

# 34. Former mud village.

Approximately 30 buildings have been abandoned. The roofs and walls of most of these buildings have crumbled.

- 35. Five probable storage and maintenance buildings, all single story, gable roof, total roof area approximately 12,000 square feet.
- 36. Possible processing building, 115 x 20, single story, gable roof. At northeastern end of building is small probable tank on top of roof. Also along the eastern edge of building are five probable ventilators. This building is on the lower slope of a small cone-shaped hill on top of which is a small water tank and possibly a small pumphouse.
- 37. Active mining and exploration area.

The predominant activity at present appears to be drilling and exploratory work, with actual mining activity limited to only one shaft mine and

- 17 -

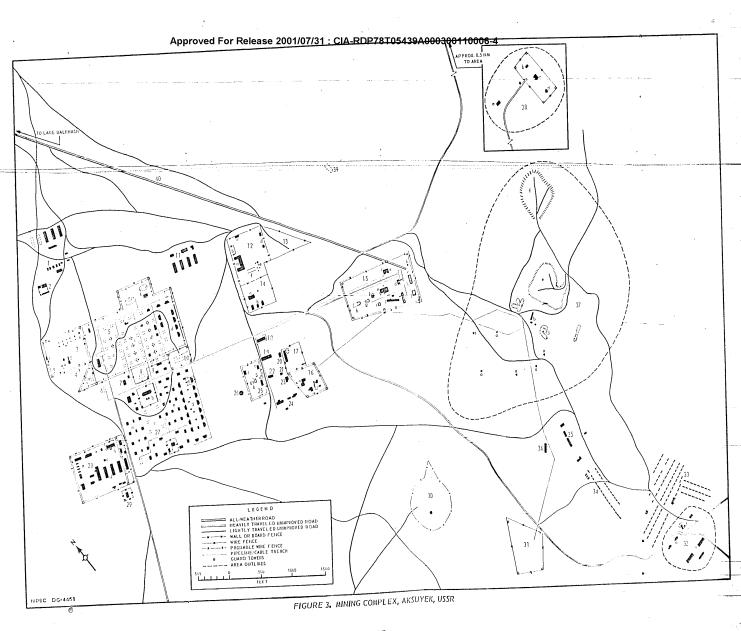
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one open-pit mine. No concentration facilities could be detected in this area, although at least, primary crushing is being done. Recent extensive exploratory activity around the open pit suggests plans for major expansion of mining.

- a. Six drill rigs approximately 35-40 high.
- b. Headframe, approximately 50 high and associated possible primary crushing building,  $110 \times 10$ , single story, gable roof. A vertical tank, approximately 10 in diameter, and several small miscellaneous buildings are nearby.
  - c. Waste dump.
  - d. Waste dump associated with headframe.
- e. Open-pit mine, approximately 5.5 acres in extent. Excavation appears to be active at time of photography.
  - f. Waste dump associated with open-pit mine.
- 38. Unidentified secured area of approximately 4 acres, secured by single wire fence, four guard towers, gatehouse, and floodlights. A low earthen mound surrounds the area a short distance outside the wire fence. Access to the area is by a well-engineered all-weather road. This road connects to the main highway to Lake Balkhash, but apparently has no good connection with mining area.
- a. Gatehouse,  $15 \times 15$ , single story, gable roof. Immediately to the west and outside the fence is an unidentified building,  $35 \times 25$ , single story gable roof.
  - b. Possible tent, approximately 40 x 15 maximum dimensions.
- c. Main building, 65 x 45, single story, hipped roof, with two 15 x 10 covered entrances, and protected by 2 lightning arrestors a few feet from each end of building.
- d. Probable storage building,  $30 \times 25$ , single story, probable hipped roof, with one 15 x 10 covered entrance, and protected by one lightning arrestor near northern end of building.



- e. Administration building and guard living quarters,  $70 \times 45$ , multistory, gable roof.
- 39. Unidentified construction at the base of a small hill. Linear configuration of shadows suggests a possible underground installation with a covered entrance measuring approximately 105 feet in width. Nearby are two cleared strips which connect with an unidentified plowed area of approximately 32 acres.

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- 40. Well-engineered, all-weather road, probably rolled gravel top, maximum width approximately between drainage ditches, connects installation with railhead near the southern tip of Lake Balkhash.

## REFERENCES

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Acquisition No

Date

Classification

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MAPS

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- 21 -

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